**Classroom Vignettes**

**Vignette 1: Math Quiz Fervor**

Paul teaches fifth-grade students at Emerson Elementary School. His daily mathematics lessons are almost always concluded by a 5-item quiz because Paul believes the prospect of these end-of-lesson quizzes motivates his students to pay closer attention during the lesson. Paul uses an items-correct grading system whereby his students’ final grade in mathematics is based on each student’s average score on these per-lesson quizzes. Because Paul’s students invariably score well on the mathematics section of the state’s annual accountability tests, his principal expresses delight with Paul’s frequent use of daily quizzes.

**Vignette 2: Fertilizer A**

At the end of their investigation of fertilizers, the teacher held a discussion with the whole class about how to report their work so that others could understand what had been done, what had been found, and how it could be explained. The students ended up with a list of points that made a good report of an investigation. The teacher wrote these in large print on a chart and pinned it to the wall. While the students wrote their reports of their investigation, they were reminded to pay attention to the points listed. When they presented their reports to each other, they used the list to make constructive comments about how the reports (their own and others) could be improved.

**Vignette 3: Building-Block Status**

During any instructional unit taking more than three weeks to complete, Maria Sanchez tries to isolate the pivotal en route skills or bodies of knowledge that she believes her students must master in order to achieve the instructional unit’s most significant intended objective. Maria was trying to build the big idea that animals have different structures that meet their needs and respond to the environment. She came up with a list of three building blocks: 1) All insects have characteristics that perform certain functions; 2) Insects share some common features, yet vary in other ways; and 3) Insects have characteristics that help them survive in a wide variety of places. Maria developed assessments for each of the building blocks. For the first building block, Maria gave her students sets of cards listing structures (i.e. legs, thorax, head, spiracle, abdomens, bristles, antennae, wings) and had students match structures with their functions. For the second building block, Maria had students compare and contrast a list of features on a T-chart as an exit pass. For the third building block, Maria gave her students a list of insect features and students were able to identify how each feature helps the insect survive. Based on her students’ performances on these building block assessments, Maria often- but not always- modifies her planned instructional activities so those activities mesh more appropriately with the students’ current levels of achievement.

**Vignette 4: Fertilizer B**

In a fifth-grade class, students were involved in investigating the effect of various fertilizers on the growth of different kinds of seedlings. Some students planted lettuce seedling, some nasturtium, some cabbage, and others used various kinds of tomato seedlings.

One group set up their trials very carefully, using the same soil before mixing in equal amounts of fertilizer, filling identical pots, and planting seedlings of the same size in them. However, the teacher noticed that they watered their seedlings without taking care to use the same amount of water for each one.

As they clearly were aware that they needed to keep things the same for fair comparisons, the teacher asked them if they thought it mattered that they’d watered their plants with different amounts of water. They said it wouldn’t make any difference because any extra water would just go to the bottom of the pots and drain away.

The teacher realized that this had implications for their understanding of how fertilizers work, as the students did not seem to realize that the fertilizers could be washed away.

She asked them to investigate separately what happens when small amounts of fertilizers are put in water. They observed that the fertilizers dissolved and realized that the amount of water was a variable that had to be controlled for a fair test. They also advanced their ideas about how plants could be affected by fertilizer.